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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,402	12/07/2004	Christopher J. Criscuolo	2832 (203-3308)	4034

Covidien
60 Middletown Avenue
North Haven, CT 06473

7590

05/21/2010

EXAMINER

DANG, PHONG SON H

ART UNIT	PAPER NUMBER
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3773

MAIL DATE	DELIVERY MODE
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05/21/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,402	CRISCUOLO ET AL.	
	Examiner	Art Unit	
	SON DANG	3773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,23-28,32-36,40-44,48 and 49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,23-28,32-36,40-44,48 and 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/28/2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 21, 23-24, 27, 32-36, 40-44 and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,536,127 to Pennig (Pennig) in view of US Patent No. 6,001,101 to Augagneur et al. (Augagneur).

In Regards to claims 21, 23-24, 27, 32-36, 40-44 and 48-49:

Pennig teaches:

A surgical tack (1, Fig. 1) for attaching a material to tissue comprising: a head (2, Fig. 1) having a drive thread (5, Fig. 1) formed on an outer surface thereof, wherein the drive thread (5, Fig. 1) is configured to prevent threaded engagement of the head (2, Fig. 1) into tissue; a barrel portion (3', Fig. 2) extending from the head and having a tissue engaging thread (4, Fig. 2) formed on an outer surface thereof and extending substantially along an entire length of the barrel portion (3', Fig. 2), wherein a distal end of the drive thread (5, Fig. 2) and a proximal end of the tissue engaging thread (4, Fig. 2) define a gap (Fig. 2)

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therebetween, wherein the proximal end of the tissue engaging thread (4, Fig. 2) is in the same plane as the distal end of the drive thread (5, Fig. 2) and the plane is substantially transverse to a longitudinal axis of the barrel portion. A transition zone (gap between drive thread 5 and tissue thread 4, Fig. 2) between the drive thread and the tissue engaging thread. A leading edge of the drive thread (5, Fig. 2) is tapered. Wherein the maximum diameter of the drive thread (5, Fig. 2) is greater than the maximum diameter of the tissue engaging thread (4, Fig. 2). Wherein the barrel portion (3', Fig. 2) includes a smooth or rounded leading edge (tip, Fig. 2). Wherein the drive thread (5, Fig. 2) is configured to facilitate removal of the tack. Wherein a first end of the drive thread (5, Fig. 2) is laterally spaced from a second end of the drive thread (5, Fig. 2).

Pennig fails to teach:

A throughbore extending through the head and barrel portion for receipt of a drive tool.

The drive thread and the tissue engaging thread have substantially the same pitch.

Augagneur teaches:

A throughbore (Fig. 2) extending through the head (2, Fig. 1) and barrel portion (1, Fig. 1) for receipt of a drive tool.

The drive thread (20, Fig. 1) and the tissue engaging thread (10, Fig. 1) have substantially the same pitch.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a through bore into the surgical screw of Pennig in order for a drive tool to deliver the screw into bones more stabilized instead of a shallow bore.

4. Claims 34, 36 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pennig in view of Augagneur and further in view of US Patent No. 4,456,005 to Lichty (Lichty).

In Regards to claims 34, 36 and 42:

Pennig teaches:

The surgical tack of claims 21, 35 and 40 (see rejection of claims 21, 35 and 40 above).

Pennig fails to teach:

The drive thread and the tissue engaging thread have substantially the same pitch.

Lichty teaches:

The drive thread (22, Fig. 1) and the tissue engaging thread (16, Fig. 1) have substantially the same pitch.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the drive threads and tissue engagement threads to have the same pitch so that a bolt can be threaded on to the drive thread for further securing the screws into bone.

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5. Claims 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pennig in view of Augagneur and further in view of US Patent No. 5,169,400 to Muhling (Muhling).

In Regards to claims 25 and 28:

Pennig teaches:

The surgical tack as recited in claim 21 (see rejection of claim 21 above).

Pennig fails to teach:

The through bore has a D-shaped cross-section.

Muhling teaches:

The through bore has a D-shaped cross-section (Figs. 2-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the D-shaped through bore into Pennig in order to enhance the torque to be applied to the screw.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pennig in view of Augagneur and further in view of US Patent No. 6,030,162 to Huebner (Huebner). Pennig does not disclose a chamfered leading edge of the drive thread. Huebner does not appear to expressly disclose a chamfered drive thread on the head portion 26. However, Huebner does disclose a chamfer 80 on the leading section 24 (See Huebner figure 2; Huebner, col. 4, 63-65). Huebner also discloses, "[the] termination zone 80 [or chamfered portion] could be used on any of the screws described herein." Huebner, col. 5, lines 6-7. This suggests that the chamfered portion can be used on the trailing head portion 26. It would be obvious to apply a chamfered

portion, as taught by Huebner, on the head portion of Pennig, so as to allow for smooth rotation and insertion.

Response to Arguments

7. Applicant's arguments with respect to claims 21, 23-28, 32-36, 40-44 and 48-49 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL** base on the amendment filed on 10/21/2009. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON DANG whose telephone number is (571)270-5809 or email address is son.dang@uspto.gov. The examiner can normally be reached on Monday-Friday 7:30 AM - 5:00 PM EDT.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on 571-272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. D./
Examiner, Art Unit 3773

/(Jackie) Tan-Uyen T. Ho/
Supervisory Patent Examiner, Art Unit 3773